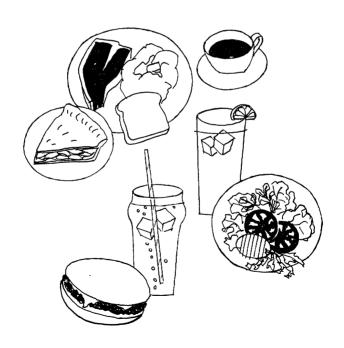
## Food

## LEARNING





## Habit—and More

HAZEL K. STIEBELING AND THELMA A. DREIS



PEOPLE at Cornell University wondered why girls living in dormitories disliked some foods, why they were writing home about it, and whether the dislikes meant the girls were being poorly nourished.

In that they were not alone. Many people—parents, teachers, dietitians and others responsible for group feeding, home economists, grocers, sociologists, and anthropologists—would like to know more about why people eat what they do; why they often spurn the good, nutritious things put before them; and why some refuse even to taste new, different, and maybe exciting foods.

Nutritionists at Cornell asked each girl to keep a record for 7 days of the foods she actually ate. They then interviewed each about any influences that might affect what she ate.

They gave each a list of 185 food items on which she was asked to make a check mark in one of several columns with headings such as "Will not eat it because I dislike it or it disagrees with me"; "Will not choose it, but will eat it if it is served"; and "Will eat it frequently."

Finally they determined the extent to which each girl used a number of foods, including milk, eggs, bread, cereals, and potatoes, which were available at mealtime but were served only upon request.

The nutritionists learned that the diets of most of the girls provided less than 70 percent of the recommended allowances for calcium, iron, and thiamine. In general, however, the inadequacy of their diets was not a direct result of distaste for certain foods.

Most of the foods on the "Will not eat" list were seldom served. The list included buttermilk, oysters, turnips, olives, heart, mushrooms, canned figs, pumpkin, cooked celery, soft-boiled and poached eggs, tongue, parsnips, and pimiento. Rejection of these foods, except eggs, would have little effect in the long run on the nutritive content of their diets.

The main reason for the inadequacy was that the students ate too little of some free-choice foods—milk, eggs, bread, cereals, and potatoes. Only a few girls listed them as foods they strongly disliked.

In practically every instance of low intake of calcium and iron, the daily addition of one or two glasses of milk and an egg would have increased the intake to a more satisfactory level. Use of more bread and cereals would have met their needs for thiamine. More of all of the free-choice foods would have increased the protein and riboflavin in their diets.

Thus, for this group of young people, the failure to get diets as good as those recommended by the National Research Council seemed to result from indifference and misinformation about food values rather than dislikes. The girls apparently did not realize the nutritional importance of milk, eggs, bread, and cereals. Eating more of them would mean more calories, of course; the extra calories would require more physical activity or the reduction in the amounts of some items nutritionally less valuable if the intake and expenditure of energy were to balance.

Preferences among kinds and forms of foods pose problems for military authorities when they come to serve men of varied customs and habits from the same menu and maybe at the same table.

The soldier from Nebraska, for example, may have little interest in hominy, while the man from Georgia likes it. Does the northerner object to hominy itself or to the southern style of cooking?

In a study of feeding problems at Smoky Hill Army Air Field, Salina, Kans., during the Second World War, the food consultants noticed that the plate and kitchen waste of hominy was high for the first shift of a 24-hour period but low for the second shift.

They investigated and discovered that the only difference was in the method of preparation. The cook on the first shift had prepared it southern style. The cook on the second shift, who did not know the way southerners usually prepared hominy, called upon his own ingenuity and had baked it with a cheese sauce in much the same way as he baked macaroni and cheese. His way made hominy seem more familiar to the midwestern men, and they ate it with gusto.

Another investigation made in eight camps by the Office of the Quartermaster General showed that the way fish was prepared had much to do with how well the soldiers ate it. The typical Army cook knew little about cooking fish. His attitude was that fish was unpopular, he had to serve it once a week, the men did not like it, and they were not going to eat it-so why should be take time and trouble of fixing it properly? He simply fried it and dished it out regardless. In camps where the cook added sauces or garnishes, however, the soldiers always ate more fish.

These experiences illustrate that strong dislikes may be a handicap because they make it harder for a person to adjust himself to new situations when he is away from home. They also bring out several aspects of the question, Why do we eat what we do?

Customs, attitudes, and eating habits grow out of cultural, social, and economic backgrounds.

Most people prefer the foods that their family has become used to: The group in which we are born and develop first determines what tastes good to us and what first tends to bring physical and psychological pleasure.

But our behavior as to food also reflects our individual ways of thinking about food, our tastes, and our habits of cating that grow out of our personal experiences. Thus social and individual development go hand in hand. Individual development is produced to a great extent by group interaction.

Choices within major types of foods reflect both our heritage and our response to our environment.

We can cite many examples.

Almost everyone in the United States likes milk and our many kinds of cheese. People in some countries, however, consider fluid milk a food only for young children, but they like cheese, yoghurt, and buttermilk.

Americans consume much meat, poultry, and fish. Beef is preferred; pork is next. Some groups in the world never cat any kind of meat from

warm-blooded animals because of religious beliefs. Others refuse pork but accept beef. Still others on fast days or during fasting seasons abstain from any flesh as food.

Take the cereal grain—why do we use wheat or rye or corn or rice or oats for our bread? Agricultural conditions and ease of preparation and preservation at home undoubtedly were among early determining factors.

The continuing relatively high consumption of rice in South Carolina and Louisiana reminds us that rice is of more basic importance in the South than in other parts of the country, where its use is chiefly in desserts. Rice is a staple in tropical and subtropical regions where conditions make it a highly productive food crop.

Mexicans may serve corn—maize chiefly as tortillas, a kind of unleavened pancake. Corn pone, hoecake, johnnycake, and griddlecakes are inexpensive forms of bread that are widely favored in the United States and once were used in larger quantity than today. There still is preference in some States for white cornmeal for quickbreads or mush, and in others for yellow cornmeal. Hominy, whole or as grits, is popular in the South, but is little known in the North and West. Corn as a food was introduced from America to Africa long ago. but in some countries corn is regarded only as a feed for animals.

Wheat is now our predominant food grain and is used chiefly to make a leavened, ovenbaked bread. White bread once was a rare, prestige food of the rich, but it has become widely used as efficient farm methods of wheat production and factory methods of milling flour and baking bread have lowered the relative cost of bread. Bolted patent flour makes a delicate white product as compared with the heavier, stronger flavored breads made from whole wheat, rye, or maize.

A partial reversal may have begun,

however, in ideas as to what is good bread. Some people are acquiring a taste for the more compact, flavorful, nutritious breads—more like those mother used to make from white, whole-wheat, or rye flours. Some of these are similar to the type that some Europeans call "peasantbread."

Custom and habit can become rigid. People sometimes prefer to go hungry rather than to eat unfamiliar food.

Herbert Hoover found that the Belgians after the First World War did not want the rice that was offered for relief of famine. They were used to wheat. The Japanese and Germans after the Second World War did not want corn-most Japanese wanted rice and most Germans wanted wheat or rye. If they are whole grain or enriched, the cereal foods-breads or porridge—are more alike than different in nutritive values, and each is eaten by large groups of the world's population. But even when a food has the approval of large segments of the human race, few of us are adventurous enough to use it as steady diet if it is unfamiliar and far outside the ruts we get into.

WILLINGNESS to accept different foods—to repeat—is affected by many things.

Infancy and childhood are the best times in which to develop a favorable attitude toward variety in food. Children are not highly adventurous about trying new foods, but they are more likely to be willing to adventure with a new food when they feel secure under the influence of father, mother, teacher, or others whom they trust.

The food preferences of parents, especially the father, may limit the variety of food a child will experience at home. In a study in Pennsylvania, it was found that a substantial number of mothers, 89 percent, indicated they served some foods infrequently or left them out altogether from the family's menu in deference to their husbands' food preferences.

Palatability — flavor, appearance, texture, and temperature of food—is important. What we interpret as palatable may depend on the concentration of the flavor. If we eat only a small amount of some food, we may like it because it is very sweet, very spicy, very salty, or very bitter. If we eat much of it, though, we tend to want to have the flavor diluted.

Thus we develop a habit of using mild-flavored potatoes or breads, rice, and other cereal grains as background foods for a meal. We like bread with ham in sandwiches or potatoes with roast beef. People in the Orient like rice with their curries. Young children, more conservative than adults in their judgments of what is palatable, generally prefer foods that are neither very hot nor very cold and that are delicate in seasonings and texture.

Attitudes toward food may result from experiences that have little to do

with palatability.

Special food likes may grow out of our associations with food—the foods we had when company came, the foods we had when we ate away from home, or the meals we had on Sundays, birthdays, and holidays.

On the other hand, we may come to dislike foods because of unhappy personal experiences—the green apples and overripe melons that made us sick or mixed dishes made from leftovers that were not properly handled. Nor do we relish food with a color, odor, or texture that we have come to associate with something unpleasant.

Maybe because we have no association with them, we tend also to distrust foods that are unfamiliar or exotic in color, texture, flavor, or origin.

Many people come to like foods that they think will enhance their social position and to avoid foods they fear

may lower their status.

Thus children often learn to eat certain foods to win the approval of a teacher. Adults may learn to like the things that their wealthier neighbors eat or things that are scarce or expensive. White bread, white sugar,

white rice once were prestige foods and still are for some groups. Steak, roasts, fried chicken, ice cream, and oranges once were special foods for everyone, and still are for many. Such inexpensive foods as stews, hamburger, and frankfurters often are scorned until people feel secure in their social position. Some first-generation Americans tend to shun delectable mother-country dishes until they are sure that these foods also are accepted by their new associates. Often farm youngsters grow to think of skim milk as fit only for livestock, though it has all the nutritive values of milk except those associated with the fat. And some people do not yet appreciate variety meats, such as liver and heart.

There are still other explanations for accepting or refusing foods. Soft, milky foods unfortunately sometimes are considered suitable only for young children or the ill and therefore not for healthy adults. Some think salads belong to women's parties and rabbits and are not for men. Puddings to be eaten with spoons instead of forks may be considered childish.

Some young people who wish to appear emotionally mature may be influenced to regard food refusals as childish reactions. In spite of earlier dislikes they may accept many foods for example, strongly flavored vegetables as turnips and cooked cabbage. Even adults to whom the health motive for choosing food wisely is not appealing may want to get a reputation for wide social experience: If a cosmopolitan taste is considered evidence of having dined and traveled with the best, they may eat many unfamiliar foods to achieve or maintain such a reputation. They will then eat what they may once have regarded as exotic—eel, avocado, persimmons, artichokes—besides the everyday foods.

Advertising and other promotion bring familiar and new food products to our attention and influence our choices in countless blunt and subtle ways. There is much in all this to give us thought about human behavior.

WILLINGNESS to accept food does not mean that we have to like every kind of food equally well or that we must be delighted with every vegetable on our plate.

Willingness to eat should mean a promise to ourselves that we will not confine our food selections to favorite foods if doing so leads to an inadequate diet and poor nutrition.

It is not fatal to dislike spinach, for example, if we like and eat some other kinds of leafy greens. But suppose that in addition to refusing the leafy green vegetables because we do not care for them, we also reject nutritionally kindred vegetables for other reasons: Broccoli because it is expensive, carrots because those presently on hand are rather strong flavored or woody, and sweetpotatoes or Hubbard squash because we do not want to take time to fix them. Such a heavy restriction of dark-green and deep-yellow vegetables could leave our diets seriously short in vitamin A value.

Allowing whims, half-remembered childhood experiences, or even downright finickiness to dictate our food selections is risky for good nutrition.

Modifications in diet habits may be necessary for many of us if we are to take full advantage of modern advances of science as they relate to health. By learning to like foods of the kinds and in the amounts that our bodies need, we can achieve the physical and mental vigor that will come with nutritional prosperity.

The Nation's families over the years have improved their food habits. This trend can be speeded up. But such progress calls for application of principles of learning by parents and teachers in the training of children and by all of us who wish to develop better food habits.

By setting goals for ourselves, we can redirect our food ways and modify our food habits for improved nutrition and better living.

HAZEL K. STIEBELING, Director of the Institute of Home Economics, Agricultural Research Service, has been with the Department of Agriculture since 1930, first as a food economist and since 1942 as the officer responsible for research in human nutrition and other phases of home economics.

THELMA A. DREIS, the Institute of Home Economics, joined the Department of Agriculture in 1936. She had been a staff member of the Institute of Human Relations, Yale University and had served with other Government agencies. She received a doctor's degree from American University.

## Food Produced for Home Use

. By Farm Families, 1941 and 1954

Percentage of samilies producing in the year,

